

### **Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application.

#### Listing of Claims:

1. (currently amended) A method of determining the cardiac output of a patient, the patient having a heart valve, the method comprising the steps of:
  - (a) measuring the patient's height;
  - (b) measuring the velocity time integral or stroke distance of blood flowing from the ~~heat~~ heart of the patient; and
  - (c) ~~utilising the two measurement in step (a) and step (b) to determine the cardiac output of the patient.~~ estimating the heart valve diameter and cross sectional area of the heart valve of the patient using correlation data, wherein the correlation data is defined as being indicative of correlation between a patient's height and the cross sectional area of the heart valve for a population of individuals; and
  - (d) calculating a value for the cardiac output of the patient as a product of the measured velocity time integral and the estimated cross sectional area of the heart valve.
2. (currently amended) A method as claimed in claim 1 further comprising the step of measuring the correlation between the patient's height and cross sectional area of a cardiac valve for a population of individuals ~~and utilising the correlation in step (c) to determine the cardiac output of the patient to provide the correlation data.~~
3. (previously presented) A method as claimed in claim 2 wherein said population is selected having similar body characteristics to said patient.
4. (previously presented) A method as claimed in claim 1 wherein said method is utilised to determine the output from either the aortic annular or the pulmonary annular.

5. (currently amended) A method as claimed in claim 1 wherein ~~said step of utilising comprises calculating a value for the cardiac output includes~~ utilising ~~the a~~ formula substantially of the form:

$$aortic\ annular\ diameter = 0.010 \times height\ (cms) + 0.25cm$$

to determine the diameter of the pulmonary valve and then ~~determining~~determine a cross sectional area.

6. (cancelled)

7. (currently amended) A method as claimed in claim 1 wherein ~~said step of utilising comprises calculating a value for the cardiac output includes~~ utilising ~~the a~~ formula substantially of the form:

$$pulmonary\ annular\ diameter = 0.0106 \times height\ (cms) + 0.265cm$$

to determine the diameter of the pulmonary valve and then ~~determining~~determine a cross sectional area.

8. (cancelled)

9. (new) A method of determining the cardiac output of a patient, the method comprising the steps of:

- (a) measuring the patient's height:
- (b) estimating for the heart of the patient the heart valve diameter and cross sectional area of the heart valve based on the patient's height;
- (c) measuring the velocity time integral or stroke distance of blood flowing from the heart of the patient: and
- (d) calculating a value for the cardiac output of the patient as a product of the velocity time integral and the cross sectional area of the heart valve utilising a formula substantially of the form:

$$aortic\ annular\ diameter = 0.010 \times height\ (cms) + 0.25cm$$

to determine the diameter of the aortic annular and then determine a cross sectional area.

10. (new) A method of determining the cardiac output of a patient, the method comprising the steps of:

- (a) measuring the patient's height:
- (b) estimating for the heart of the patient the heart valve diameter and cross sectional area of the heart valve based on the patient's height:
- (c) measuring the velocity time integral or stroke distance of blood flowing from the heart of the patient: and
- (d) calculating a value for the cardiac output of the patient as a product of the velocity time integral and the cross sectional area of the heart valve utilising a formula substantially of the form:

$$\text{pulmonary annular diameter} = 0.0106 \times \text{height (cms)} + 0.265 \text{ cm}$$

to determine the diameter of the pulmonary valve and then determine a cross sectional area.